

ABSTRACT

A torsional vibration measuring instrument has a plurality of reflecting means (6, 7) arranged with stipulated intervals along surface of a rotator (5) of which torsional vibration is to be measured; a pulse light irradiating means (1, 2) for irradiating a repetitive pulse light beam to the reflecting means; and an outgoing-transmitting means (3, 4) for transmitting the irradiated pulse light beam. The torsional vibration measuring instrument also has a plurality of transmitting-receiving means (8, 9) for irradiating the transmitted pulse light beam to the reflecting means, and for receiving reflected pulse light beams which have been reflected by the reflecting means; and an incoming-transmitting means (3, 4) for transmitting the reflected pulse light beams which have been received. The torsional vibration measuring instrument also has a plurality of detecting means (12, 13) for detecting the reflected pulse light beams which have been transmitted by the incoming-transmitting means; and a signal processing means (14) for processing pulse output signals which have been outputted from the detecting means and for calculating torsional vibration frequency of the rotator to be measured.